



# Public Attitudes towards Nuclear Power and Climate Change: UK-Japan Comparison after Ten Years of Fukushima Nuclear Accident

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# Introduction

- ◆ UK and Japan are the countries that still has nuclear power as an option to combat climate change
- ◆ Energy policies as well as public attitudes toward energy and climate change issues in the two countries are different
- ◆ An earlier study by Poortinga et al (2013) compared the public attitudes towards nuclear power and climate change in the UK and Japan a couple of years before and after the Fukushima nuclear accident, and suggest, among others, that the UK had a higher proportion of people who accept nuclear new build if it helps combat climate change
- ◆ The purpose of this study is to update their analysis to see if there are any changes in the public attitudes as decarbonization has become a hot issue in both countries

# The 2020 Survey

- ◆ We conducted a web based online survey for people aged 20 years and older in the UK and Japan during November 24 – December 2 in 2020 and collected 2,060 and 3,092 adults weighted the sample to make it representative of the UK and Japan, respectively

## Summary of Respondents

	(%)	
Gender	UK	Japan
Male	48.6	48.1
Female	51.4	51.9
Prefer not to say	0.0	0.0

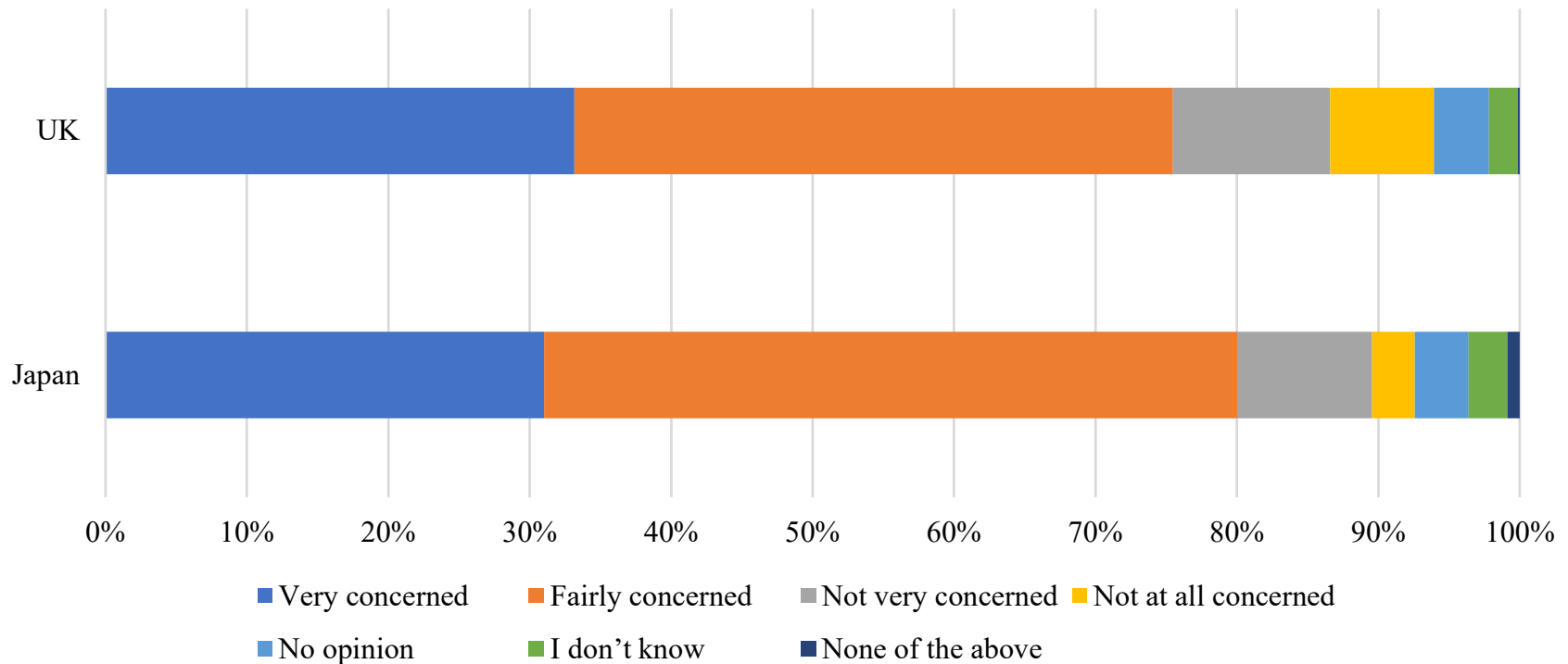
	(%)	
Age	UK	Japan
20-29	17.7	12.0
30-39	16.9	15.1
40-49	18.2	17.9
50-59	16.9	15.0
60+	30.3	40.0

	(%)	
The region of UK		
North East	4.9	
North West	12.4	
Yorkshire and Humberside	8.6	
West Midlands	9.3	
East Midlands	7.5	
East Anglia	8.1	
South West	9.0	
South East	14.6	
Greater London	12.4	
Wales	4.7	
Scotland	7.0	
Northern Ireland	1.6	

	(%)	
The region of Japan		
Hokkaido electric power area	4.3	
Tohoku electric power area	7.1	
Tokyo electric power area	35.5	
Chubu Electric Power area	12.2	
Kansai Electric Power area	16.5	
Hokuriku Electric Power area	4.1	
Chugoku Electric Power area	5.9	
Shikoku Electric Power area	3.1	
Kyusyu Electric Power area	10.2	
Okinawa Electric Power area	1.1	

The region of Japan corresponds to areas of regional electricity network operators.

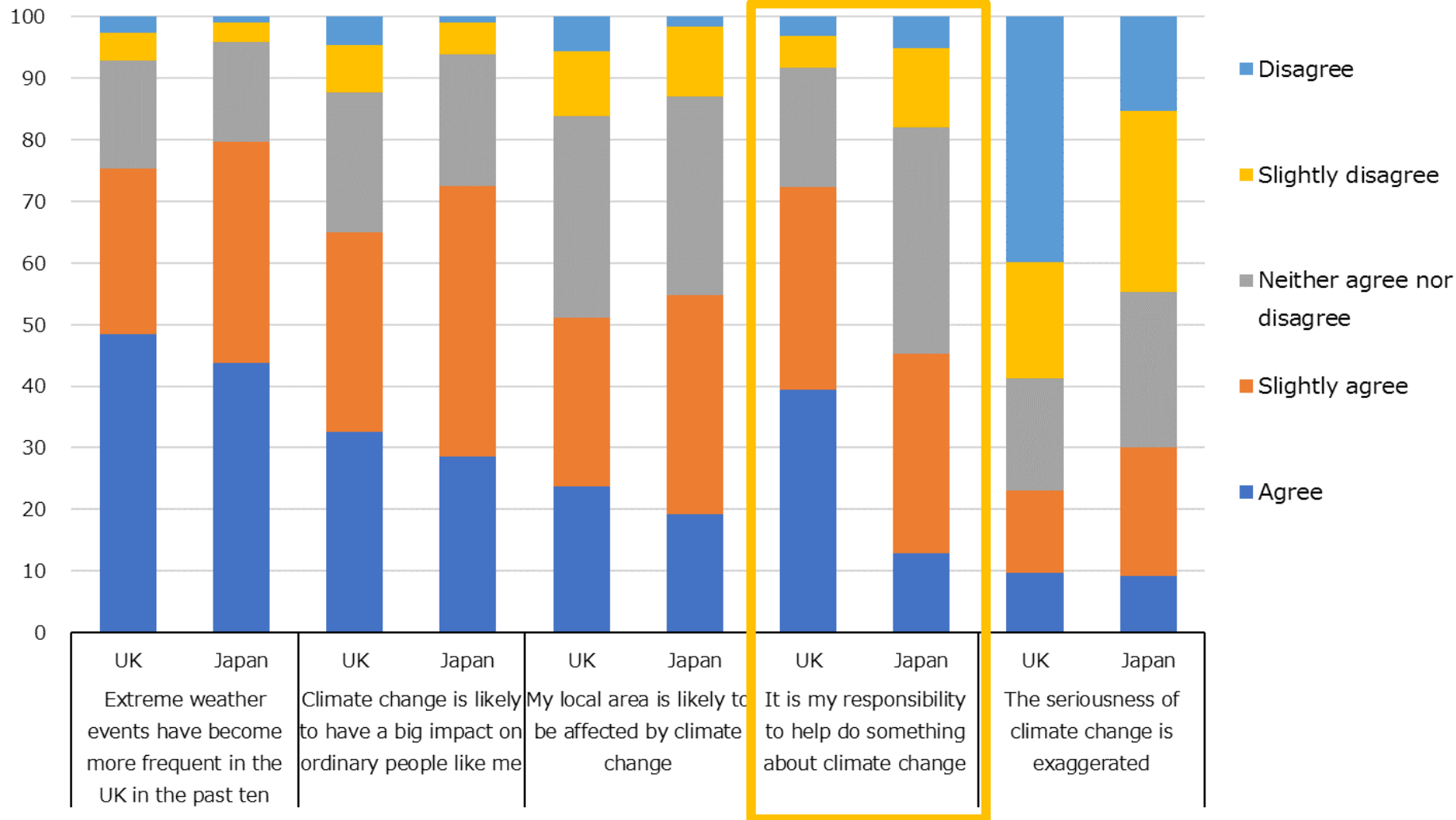
# Attitudes toward climate change



## Concern about climate change

# Attitudes toward climate change

## Agreement with statement about climate change



# Attitudes toward climate change

## Change needed to our general lifestyle and consumption habits

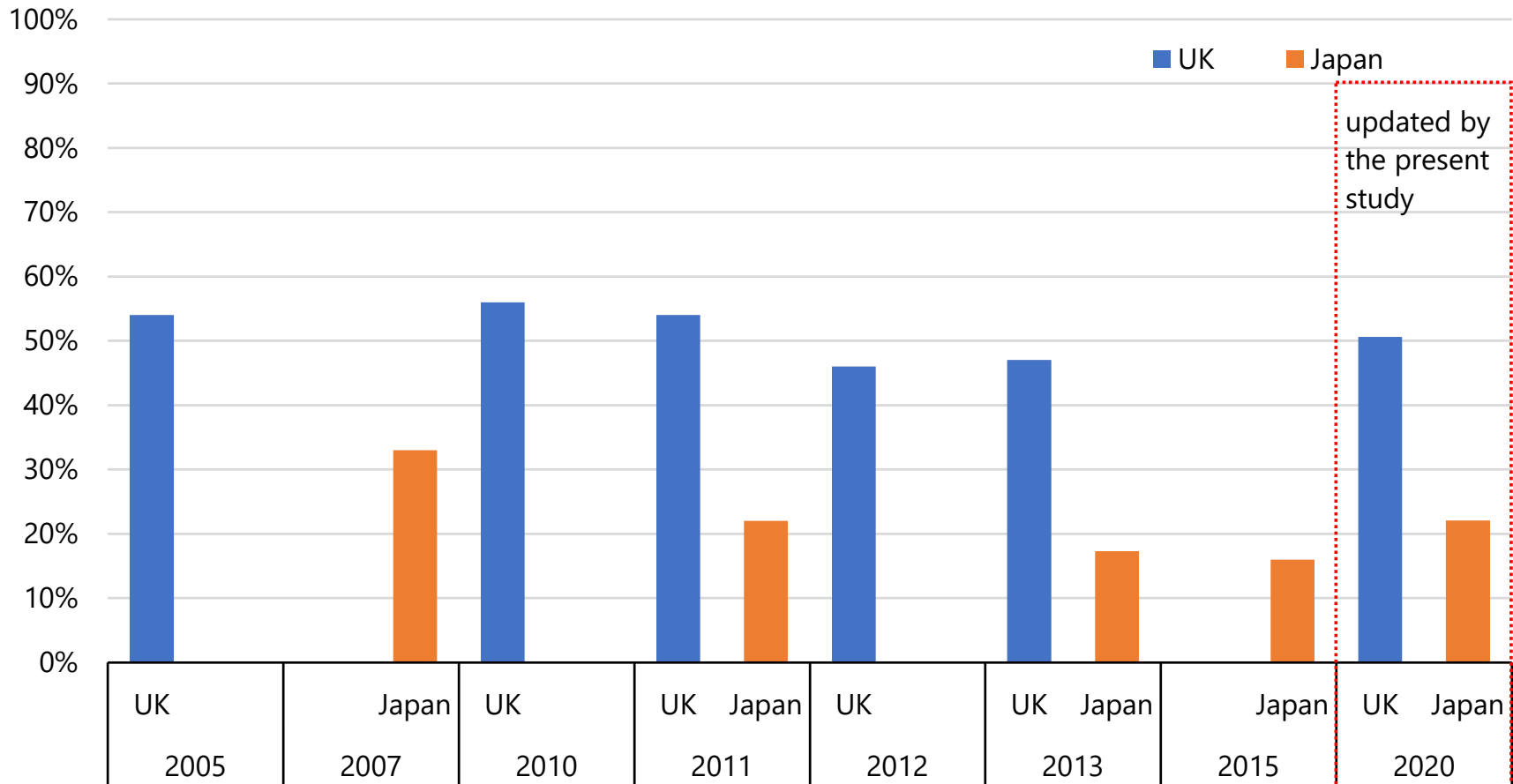
	UK	Japan
1. We need to dramatically alter our behaviour to be more energy efficient, but solutions to climate change must come through the development of clean energy source.	55.3	44.6
2. Changing our behaviour on such a large scale is not feasible, therefore, we need to rely on technological development of cleaner energy sources.	28.1	35.1
3. Neither behaviour change nor widespread use of cleaner energy technology will stop climate change happening	10.7	8.8
4. Climate change is not a problem at all	2.5	2.5
5. None of the above	3.4	9.0

# Attitudes toward nuclear

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1. Conditional acceptance of new nuclear power plants
2. Nuclear power and the alternative means to combat climate change
3. Nuclear power and renewable energy sources in energy mix
4. Perception of benefits of nuclear power
5. Perception of risks of nuclear power and trust in nuclear regulation

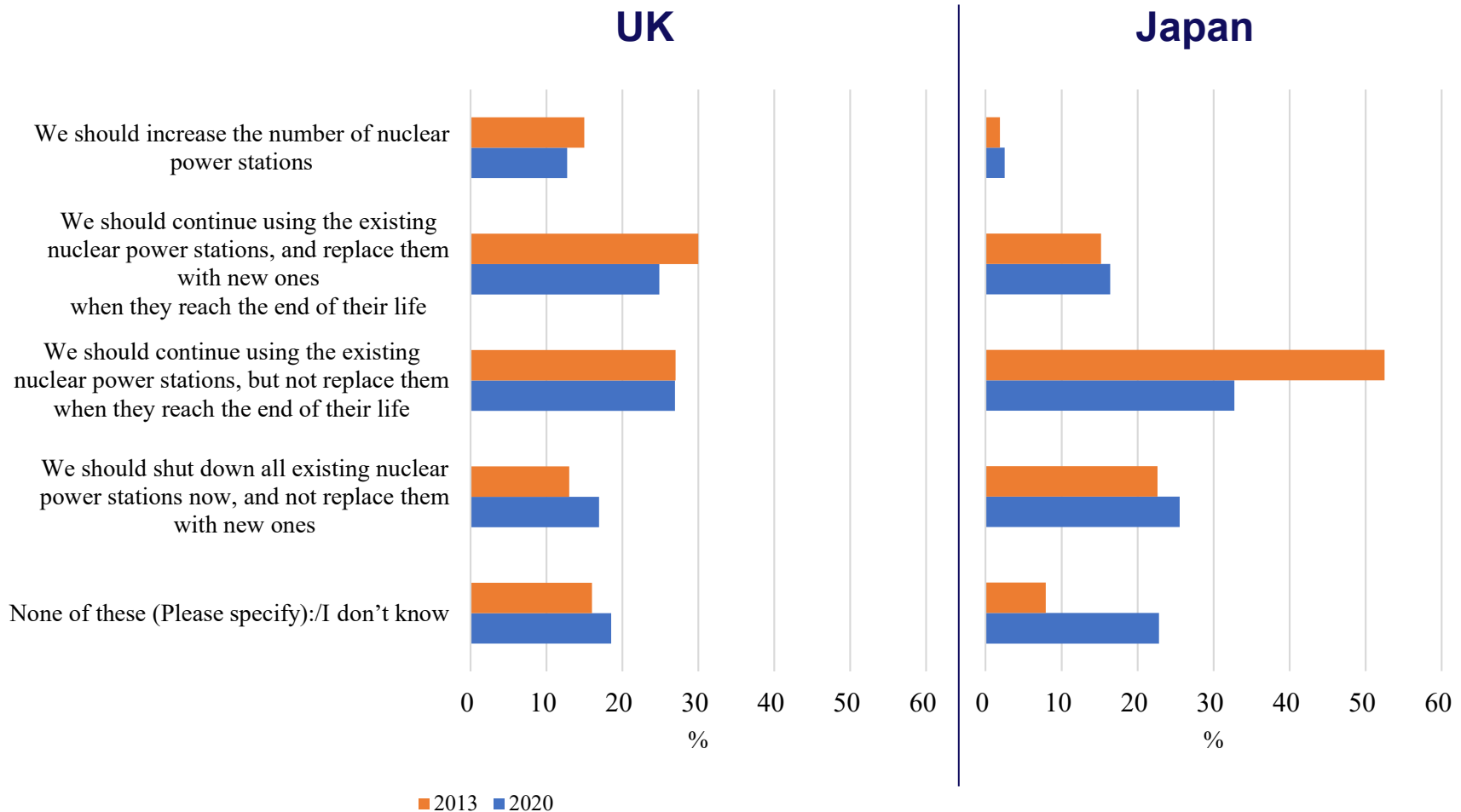
# Conditional acceptance of new nuclear power plants



**Agreement with the statement "I am willing to accept the building of new nuclear power stations if it would help to tackle climate change" (% strongly/tend to agree)**

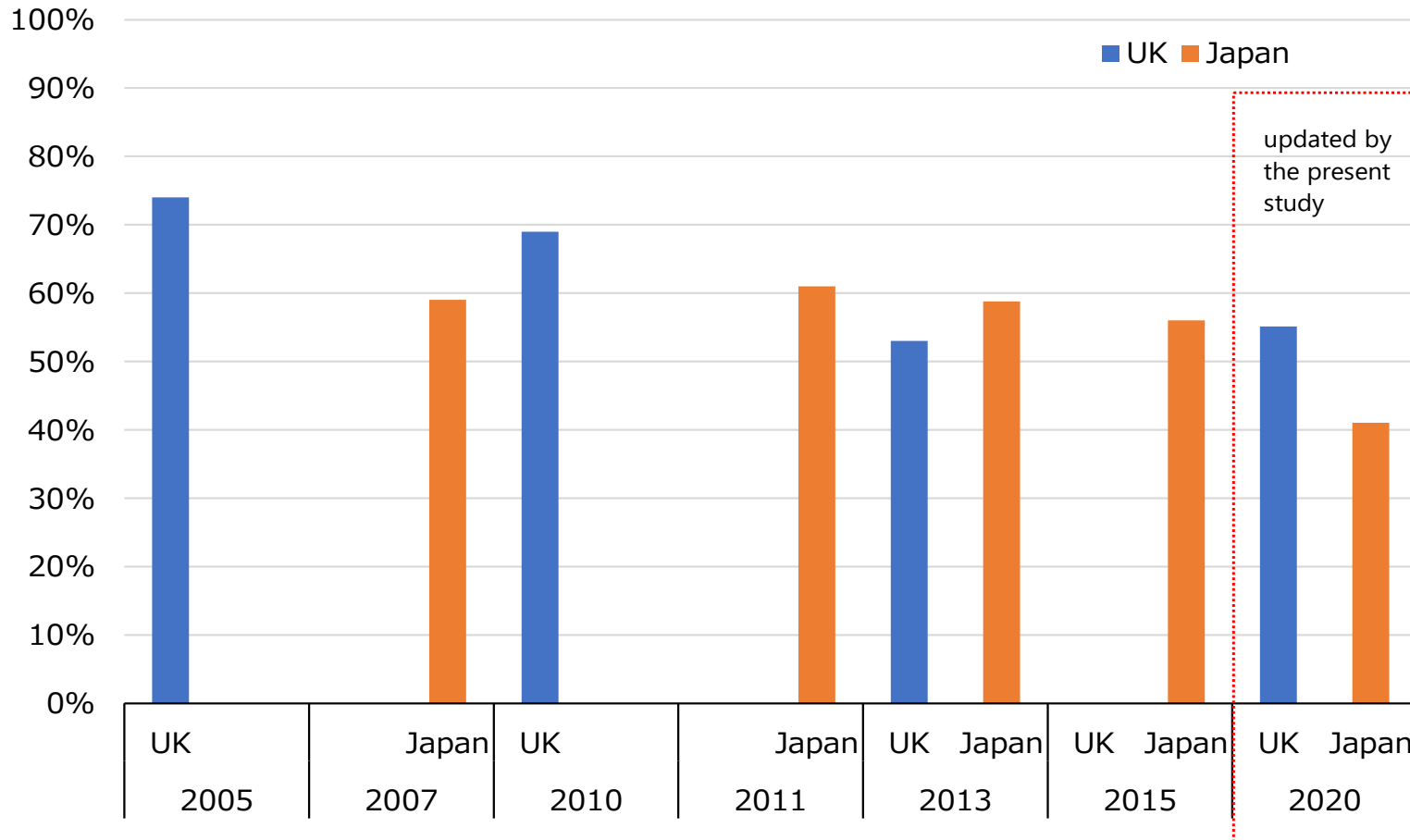


# Unconditional acceptance of new nuclear power plants



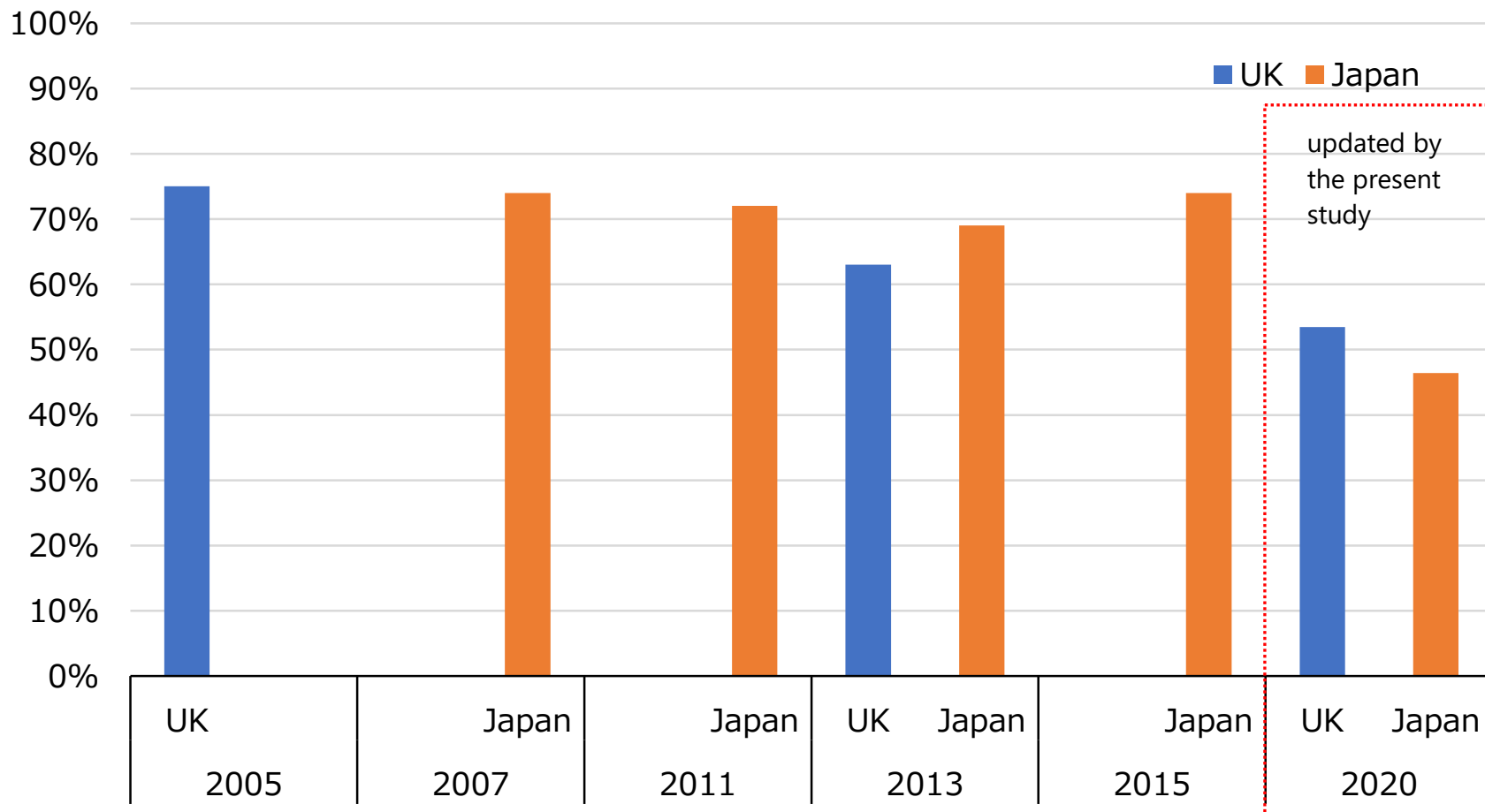
**Which, if any, of the following statements most closely describes your own opinion about nuclear power in the UK (left) /Japan (right) today?**

# Nuclear power and the alternative means to combat climate change



**Agreement with the statement “We shouldn’t think of nuclear power as a solution for climate change before exploring all other energy options”**

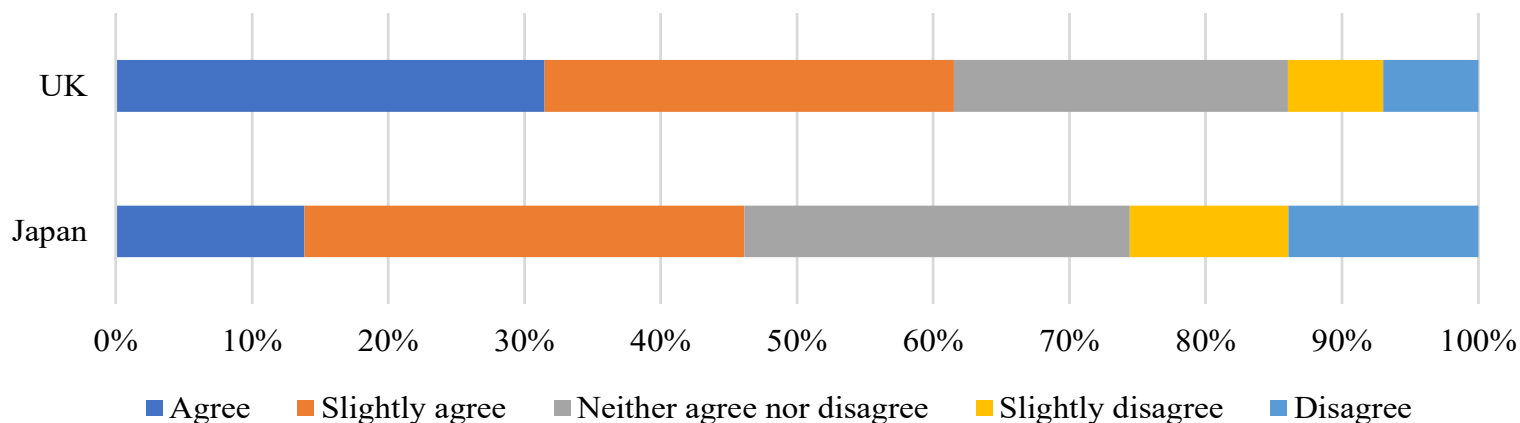
# Nuclear power and the alternative means to combat climate change



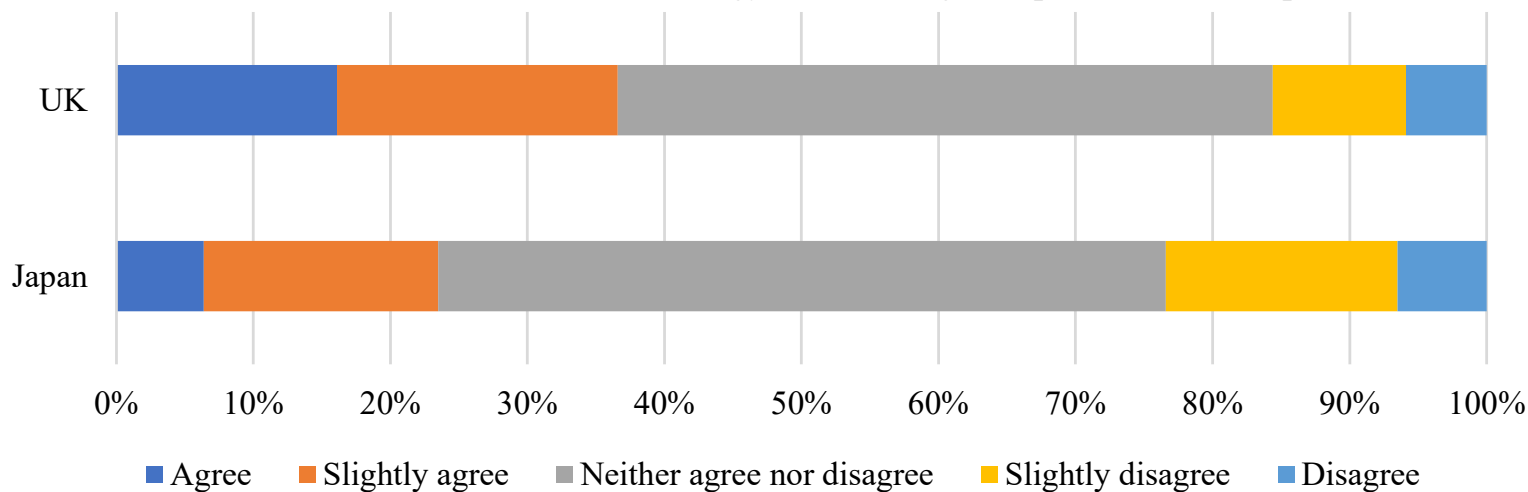
**Agreement with the statement “Reducing energy use through lifestyle changes and energy efficiency is a better way of tackling climate change than nuclear power”**

# Nuclear power and renewable energy sources in energy mix

The UK/Japan needs a mix of energy sources to ensure a reliable supply of electricity, including nuclear power and renewable energy sources



The cost of renewable energy is becoming cheaper than nuclear power

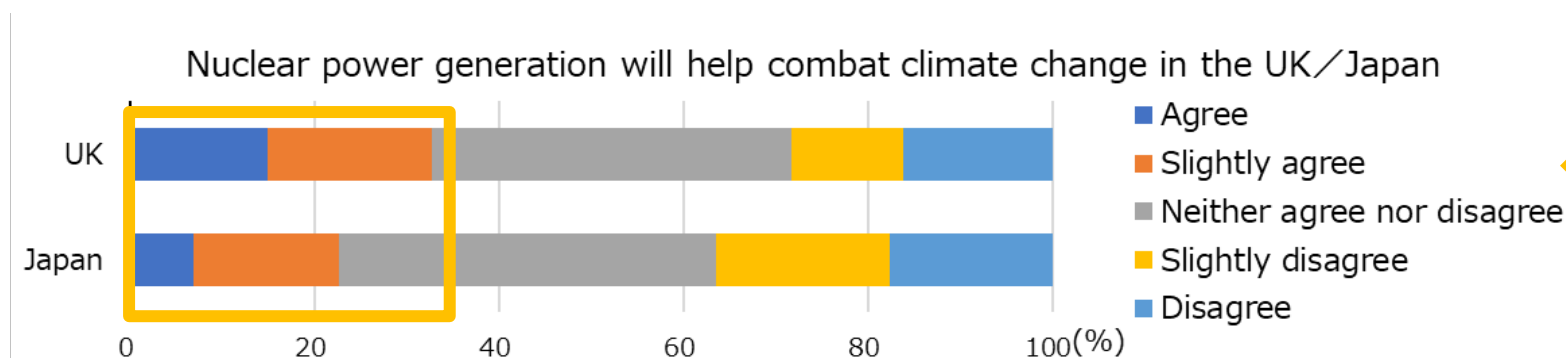


# Perception of benefits of nuclear power

## Agreement with statement about benefits of nuclear power

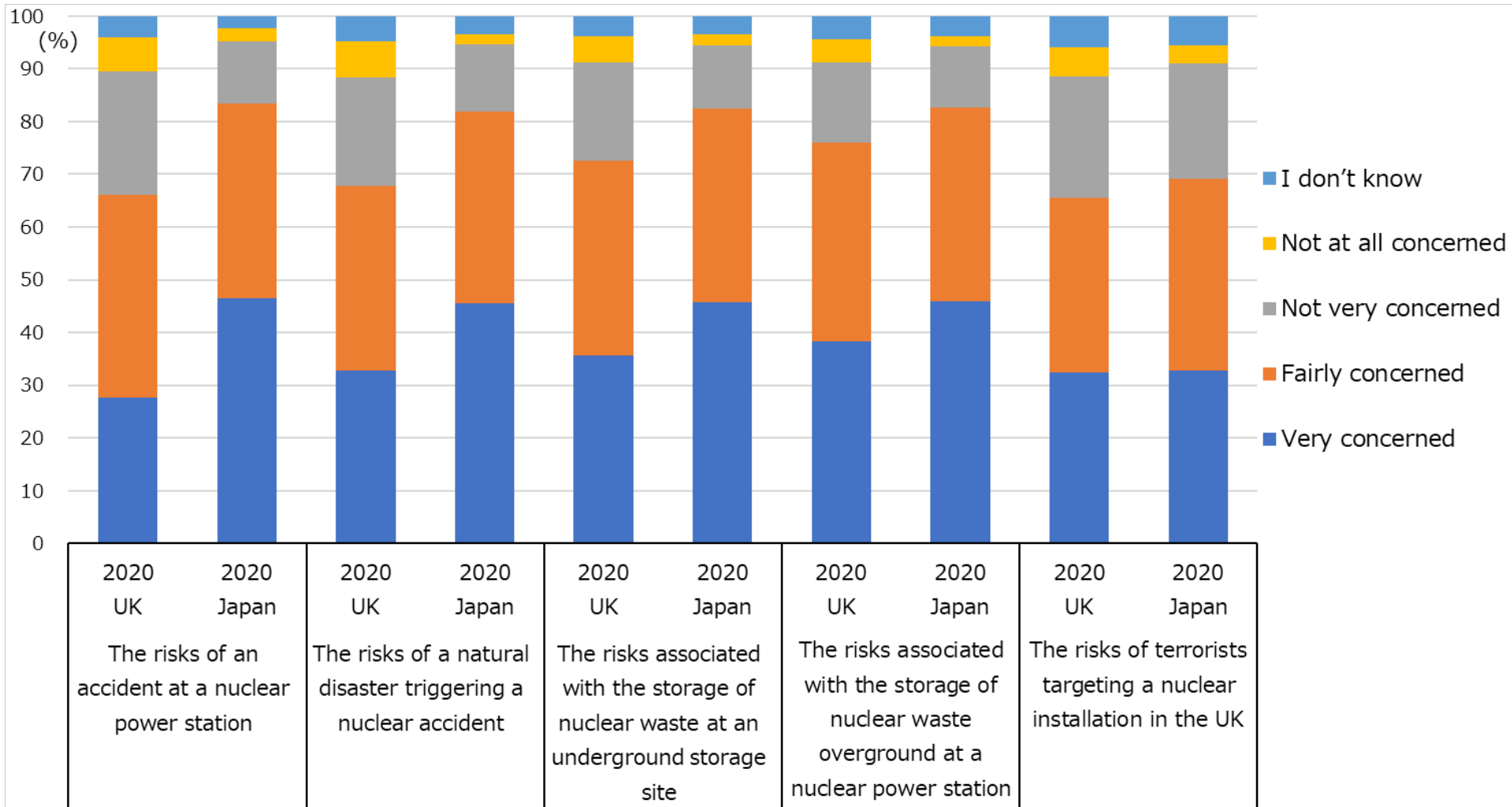
(%)

		Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Disagree
Nuclear energy provides a reliable source of energy in the UK/Japan	UK	27.9	25.4	30.5	8.1	8.2
	Japan	13.4	30.0	27.4	12.9	16.3
Thanks to the expansion of nuclear power generation, the energy supply will be secured in the long term for the UK/Japan	UK	19.7	24.3	38.1	7.9	10.0
	Japan	13.1	27.4	33.3	11.1	15.2
Nuclear energy offers affordable energy for the UK/Japan	UK	20.8	24.9	37.3	8.7	8.3
	Japan	11.3	26.0	33.8	13.7	15.1
Nuclear power generation will help combat climate change in the UK/Japan	UK	14.9	17.9	38.9	12.1	16.2
	Japan	6.8	15.8	40.9	18.8	17.7
Nuclear energy provides a safe source of energy in the UK/Japan	UK	11.2	22.5	33.5	15.2	17.5
	Japan	3.7	12.2	27.6	27.3	29.2

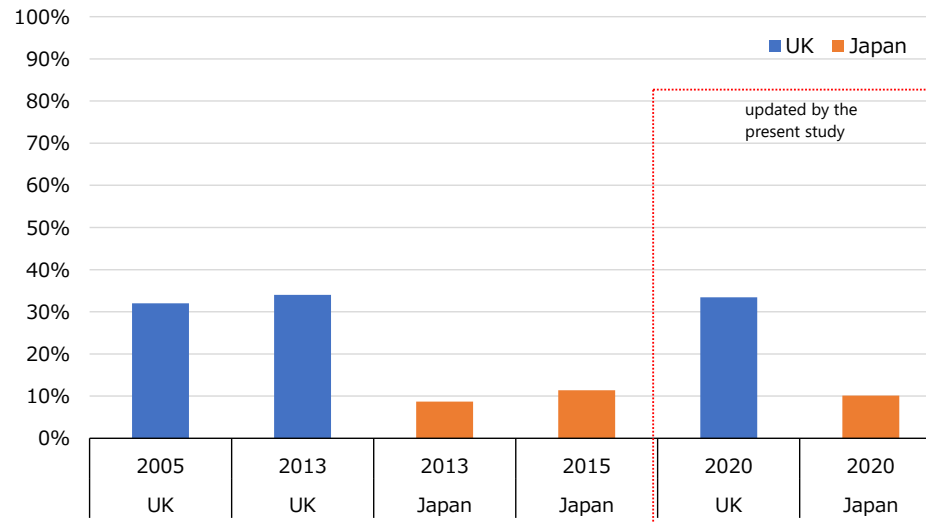


# Perception of risks of nuclear power

## Agreement with statement about risks of nuclear power

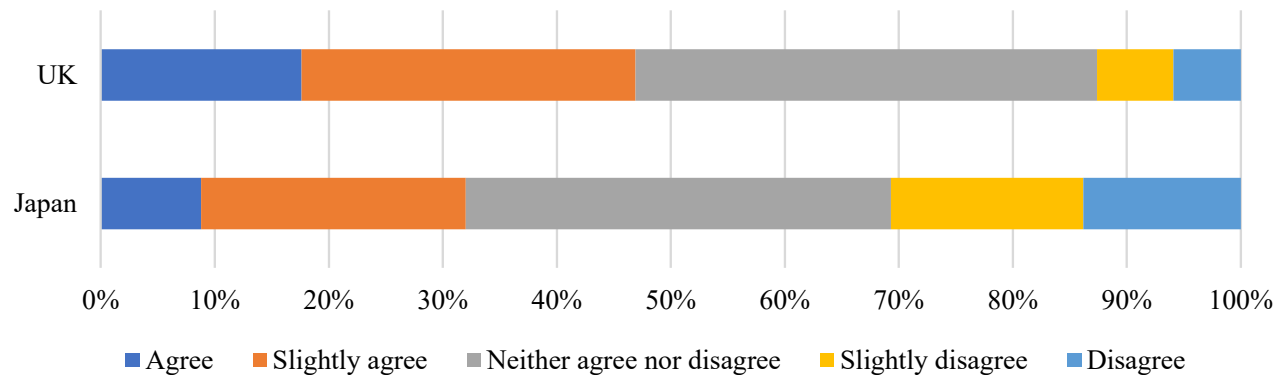


# Trust in nuclear regulation



## Confidence in rules and regulation to sufficiently control nuclear power

Nuclear power generation has become safer by taking measures based on the lessons learned from the Japan's Fukushima Daiichi



# Discussion and Future Research

- ◆ We confirmed that about a 50% of respondents in the UK indicate acceptance of new nuclear power plant if it helps tackling climate change, while it is only about 20% in Japan (p.8) and it is the same proportion of unconditional acceptance of new nuclear power plants (p.9)
  - Yet, a smaller proportion of people believe that the nuclear power would help combat climate change in both countries (p.13)
- ◆ The level of concerns about climate change are similar between the two countries (p.4), but the proportions of respondents who recognize their own responsibility to do something about climate change, and are willing to change their lifestyle to tackle climate change are lower in Japan than in the UK (p.5 and p.11)



# Discussion and Future Research

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- ◆ Confidence in rules and regulation to sufficiently control nuclear power plants has been lower in Japan than in the UK (p.15)
- ◆ Although both countries have an option to rely on nuclear power, the issues needed to be addressed to obtain conditional support for nuclear power as climate change measures, would be different
- ◆ Future research needs to investigate the effectiveness of reframing of nuclear power as means to combat climate change, and to analyze determinants of public attitudes toward nuclear and climate change